

## ABSTRACT OF THE DISCLOSURE

An automatic calibration method for use in an electronic compass. Using the automatic calibration method, the electronic compass automatically calculates and corrects offset and scale values of a geomagnetic signal by detecting one rotation of a geomagnetic axis during a predetermined period of time. The electronic compass calculates an azimuth angle upon receiving geomagnetic data from the geomagnetic sensor, and finds maximum and minimum values of sensor signals of individual axes of the geomagnetic sensor using the received geomagnetic data such that it can correct or calibrate deviation of the azimuth angle. When a time consumed for calibration is the same or shorter than a maximum calibration effective time, the electronic compass determines whether a current state of the detected entry signal indicates a predetermined steady-state flow. If the current state indicates the steady-state flow, at the same time a signal indicative of one rotation of the geomagnetic sensor is received, and the time consumed for calibration is longer than a predetermined minimum calibration effective time, the electronic compass calculates offset and scale values using the maximum and minimum values and stores the calculated offset and scale values.